

GRADE 4
SCIENCE
2000 Sample Form

LAST NAME														FIRST NAME								Middle Initial																													
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z



Directions for Students

This section of the test has multiple-choice questions and an open-ended question.

When you are taking the test, remember these important things:

1. Read each question carefully and think about the answer.
2. If you do not know the answer to a question, go on to the next question. You may go back to the skipped question later if you have time.
3. When you see a STOP sign, do **not** turn the page until you are told to do so.

Sample Multiple-Choice Question

The sample question below will show you what the test questions are like and how to mark your answers. For each multiple-choice question, select the best answer and fill in the circle next to your choice. Make sure you fill in the correct circle.

Which of the following is a way that people directly affect the environment?

- ☐ Ⓐ playing soccer
- ☒ Ⓑ dumping trash
- ☐ Ⓒ attending a concert
- ☐ Ⓓ going to school

The correct answer is B. The circle with the B in it has been filled in to show that B is the correct answer.

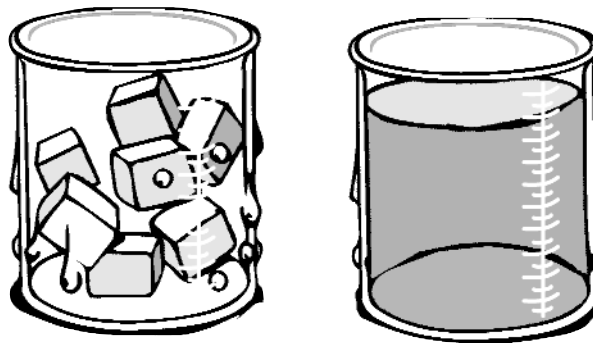




Sample Open-Ended Question

The sample question below will show you what the open-ended test questions are like and how to write your answer. You will write or draw your answer in the space following the question. When asked to explain an answer, you may use words, tables, diagrams, OR pictures.

Victor has two glasses. One glass is filled with ice cubes and the other is filled with water. Give three ways the ice and water are different.

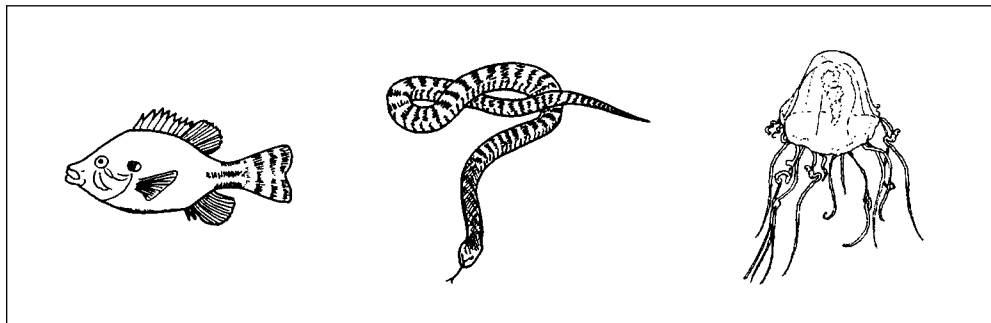
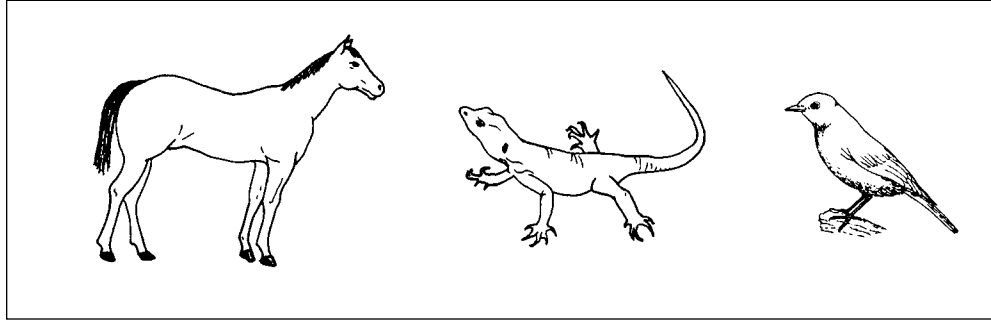


The ice cubes are colder than the water.

The water is liquid and the ice cubes are solid.

The water fills more of the glass than the ice cubes.





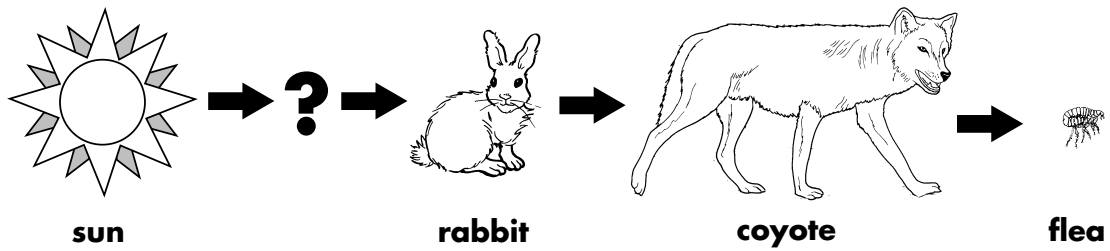
1. The class divided the animals into two groups. Which set of titles below would best label these two boxes?

- Ⓐ "Animals With Beaks" and "Animals Without Beaks"
- Ⓑ "Animals With Feet" and "Animals Without Feet"
- Ⓒ "Animals With Feathers" and "Animals Without Feathers"
- Ⓓ "Animals With Fur" and "Animals Without Fur"



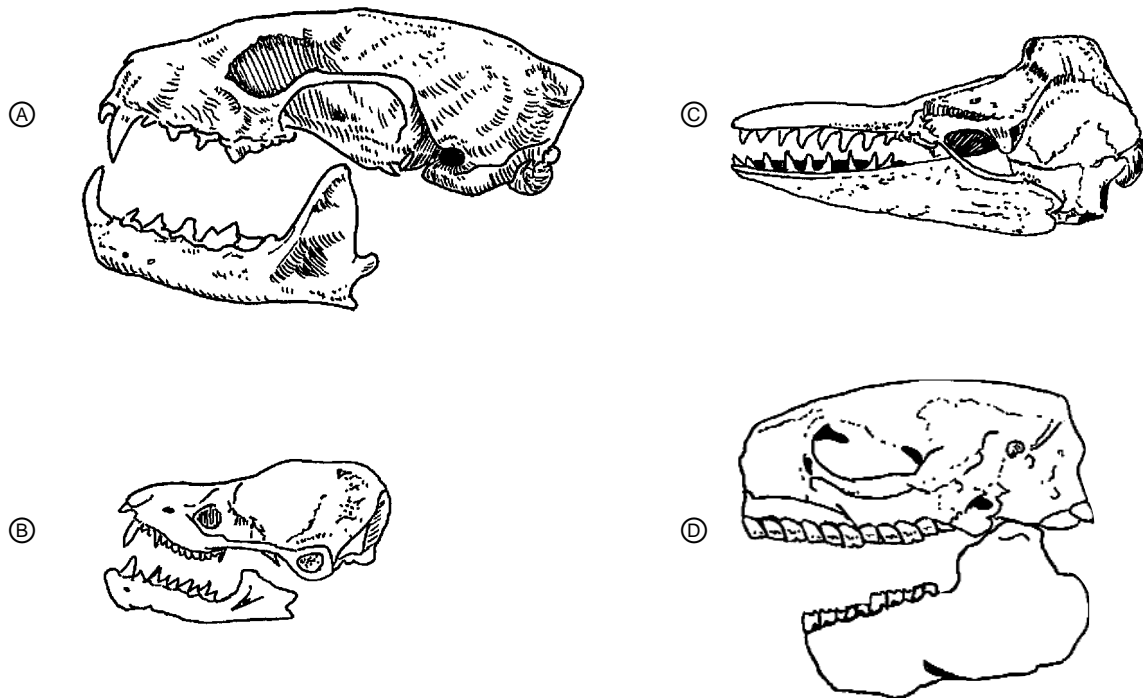


2. Which of the following is missing from this food chain?



- (A) ticks
- (B) wolves
- (C) plants
- (D) hawks

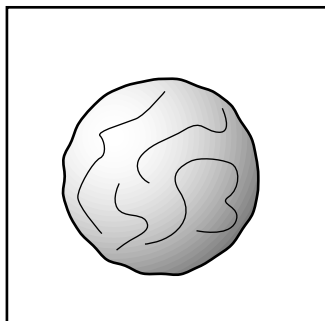
3. Which skull is probably from an animal that ate grass?



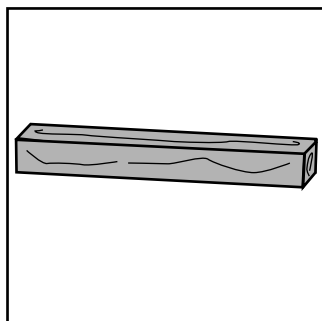


4. The pictures show the same amount of clay made into different shapes. Which piece will probably float the best?

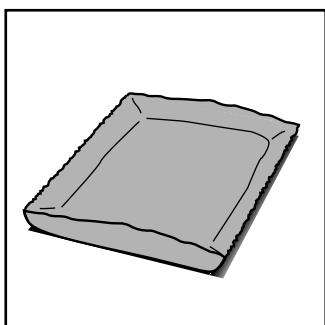
(A)



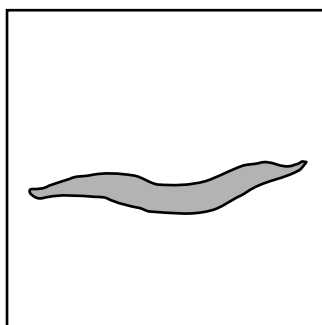
(C)



(B)



(D)



5. Which object would reflect the most light?

- (A) cloth
- (B) wood
- (C) mirror
- (D) construction paper





6. What would probably happen if it took the Earth longer to orbit the Sun than it does now?

- Ⓐ A year would have fewer than 365 days.**
- Ⓑ A year would have more than 365 days.**
- Ⓒ Animals could jump higher than they normally can now.**
- Ⓓ People would weigh twice as much as they normally do now.**

7. Which tool would be the best instrument to measure the growth of a plant's stem?

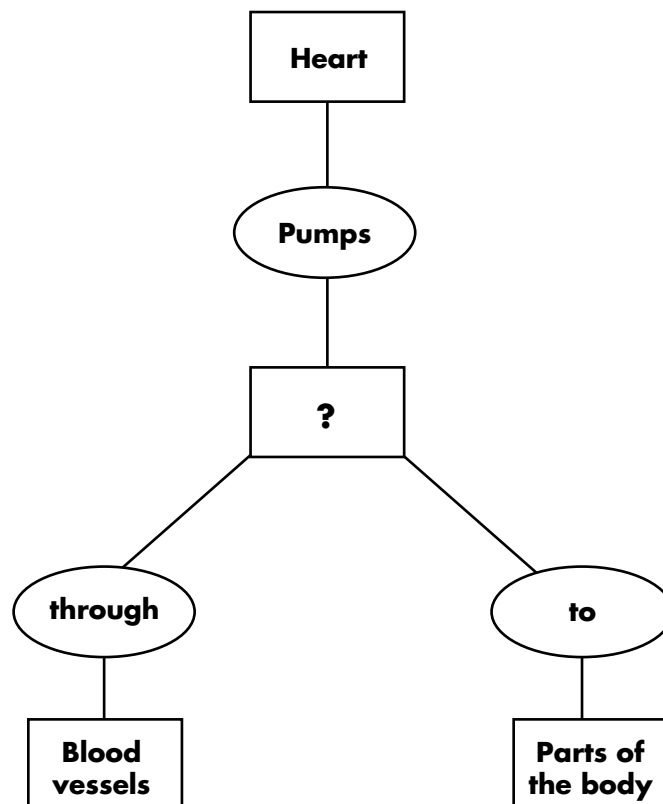
- Ⓐ ruler**
- Ⓑ thermometer**
- Ⓒ magnifier**
- Ⓓ cup**





8. Mammals are to fur as

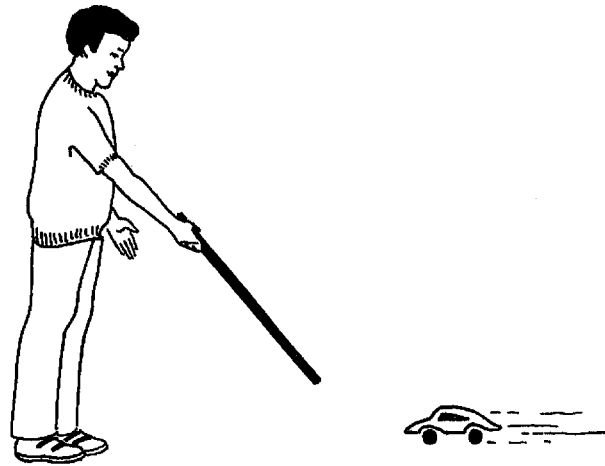
- Ⓐ lobsters are to gills.
- Ⓑ fish are to scales.
- Ⓒ snakes are to fangs.
- Ⓓ birds are to wings.



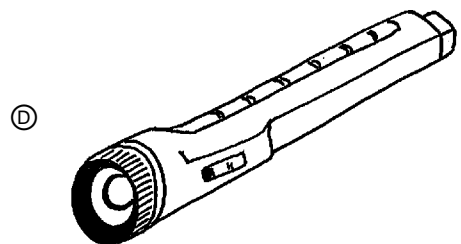
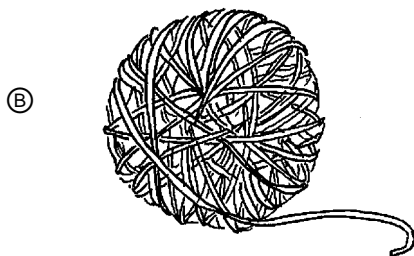
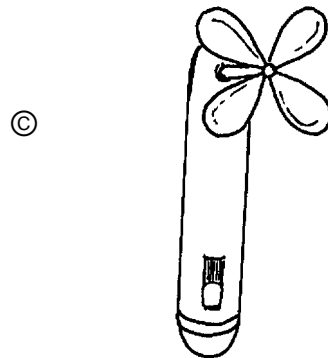
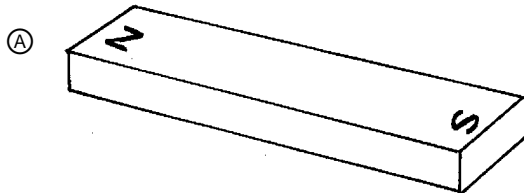
9. Which of these would best complete this concept map?

- Ⓐ Muscles
- Ⓑ Nerves
- Ⓒ Blood
- Ⓓ Air



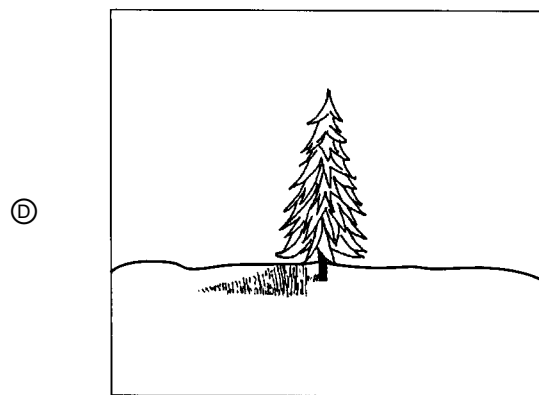
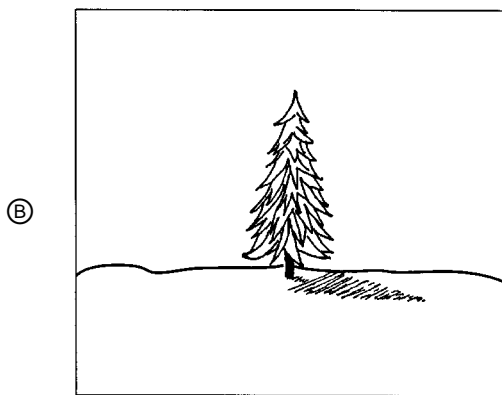
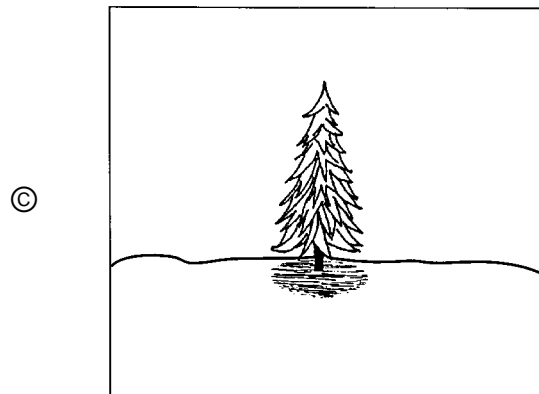
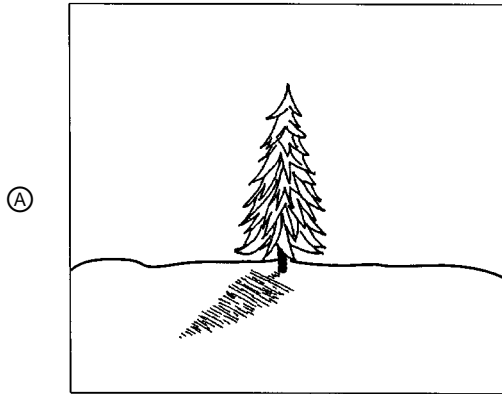


10. The picture shows Lee pulling the metal car with a wand. Which of these is probably inside the wand?





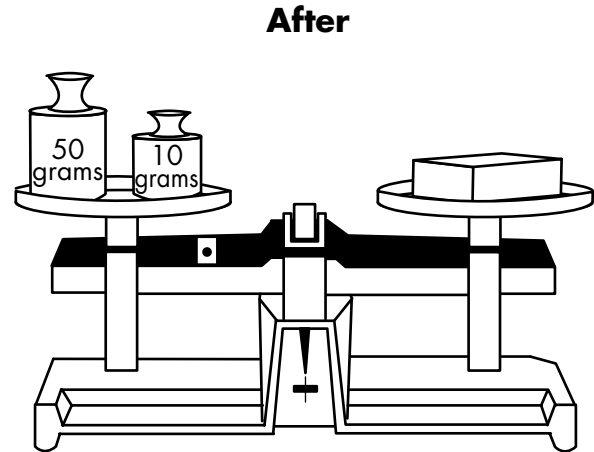
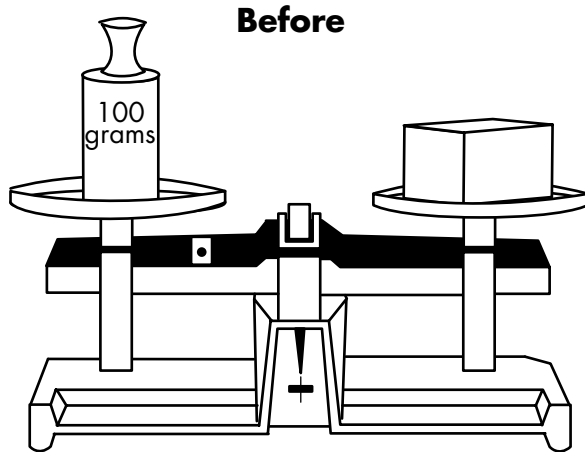
11. Which of these best shows the position of the summer sun at noontime in New Jersey?



12. Glenda was looking into a bucket of soil. The soil appeared dry, grainy, and white. The soil was probably made up mostly of

- (A) topsoil.
- (B) sand.
- (C) leaf bits.
- (D) clay.





13. The pictures show a piece of wood before and after it was cut. Fill in the chart below to tell about the wood that was cut.

	Before	After	Amount of Change
Weight of wood in grams			

List at least two properties of the piece of wood that changed.

Write your answer on the lines below.

If you have time, you may review your work in this section only.



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UNTIL YOU ARE
TOLD TO DO SO.

**DO NOT
WRITE IN
THIS AREA**



14. A truckload of sand was delivered to the school playground. It rained for a week. The sand was no longer a hill. What probably happened to the sand?

- Ⓐ It eroded.
- Ⓑ It erupted.
- Ⓒ It fossilized.
- Ⓓ It evaporated.





15. The hamsters in Palila's classroom had babies three weeks ago. She wrote these observations in her science journal.

	WEIGHT	COLOR	ACTIVITY
Hamster 1	3 grams	brown	moves little
Hamster 2	2 grams	white	always moves
Hamster 3	2 grams	black	moves some
Hamster 4	4 grams	tan	moves very little

Which would be the best conclusion from Palila's observations?

- Ⓐ Hamsters are usually tan in color.
- Ⓑ Hamsters do not weigh any more than 3 grams.
- Ⓒ Hamsters come in many colors and sizes.
- Ⓓ All hamsters are very active.

16. Above is to below as

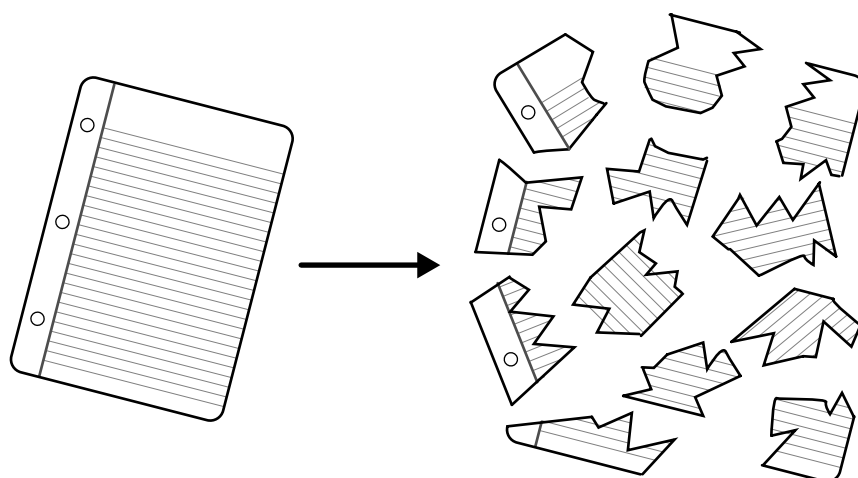
- Ⓐ early is to front.
- Ⓑ late is to behind.
- Ⓒ right is to side.
- Ⓓ inside is to outside.





17. Which of these is the best reason that an adult turtle has few predators?

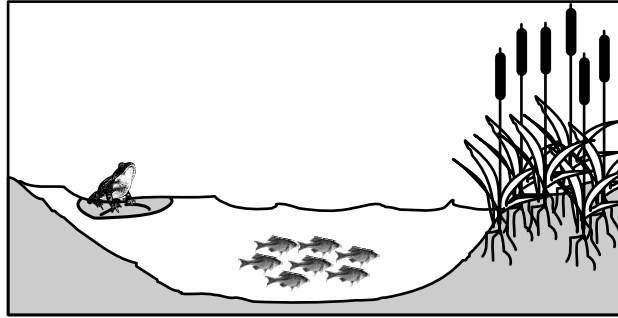
- Ⓐ its large mouth
- Ⓑ its thick shell
- Ⓒ its little eyes
- Ⓓ its big feet



18. Which of these properties changes when the piece of paper is cut as shown above?

- Ⓐ its color
- Ⓑ its total weight
- Ⓒ its shape
- Ⓓ its state of matter



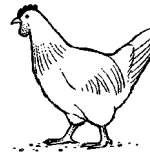


19. Which of these belongs in the ecosystem above?

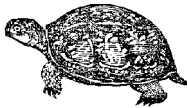
(A)



(C)

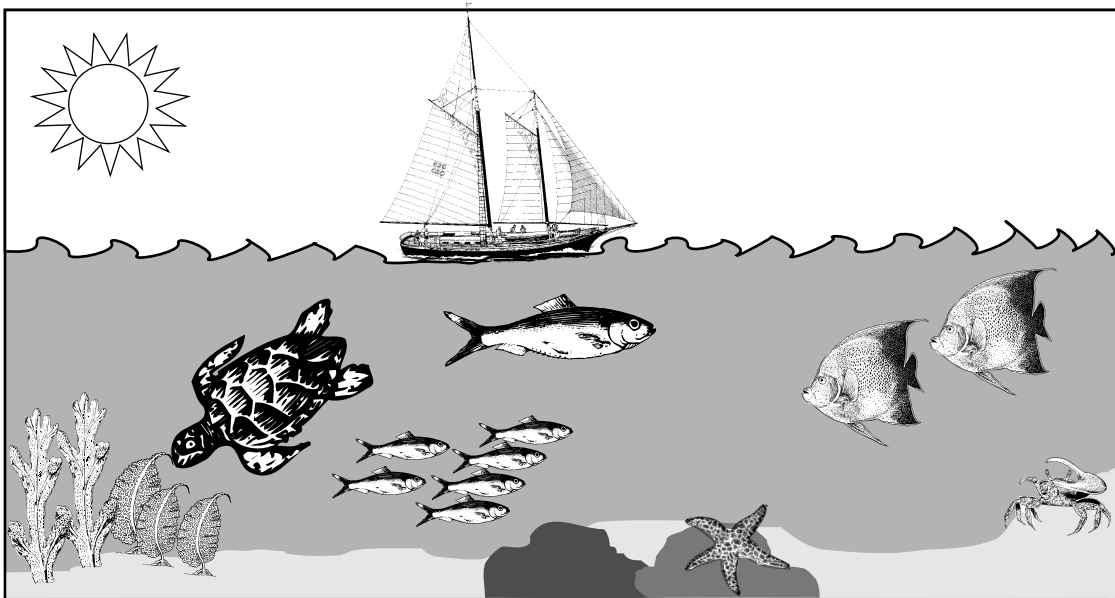


(B)



(D)





20. Where does most of the heat for this ocean system come from?

- Ⓐ the sun
- Ⓑ the animals
- Ⓒ the boats
- Ⓓ the pollution





21. Which system warns a person that soup is too hot to eat?

- Ⓐ **digestive system**
- Ⓑ **nervous system**
- Ⓒ **muscle system**
- Ⓓ **circulatory system**

22. What is the order of events that needs to happen so that bread becomes toast?

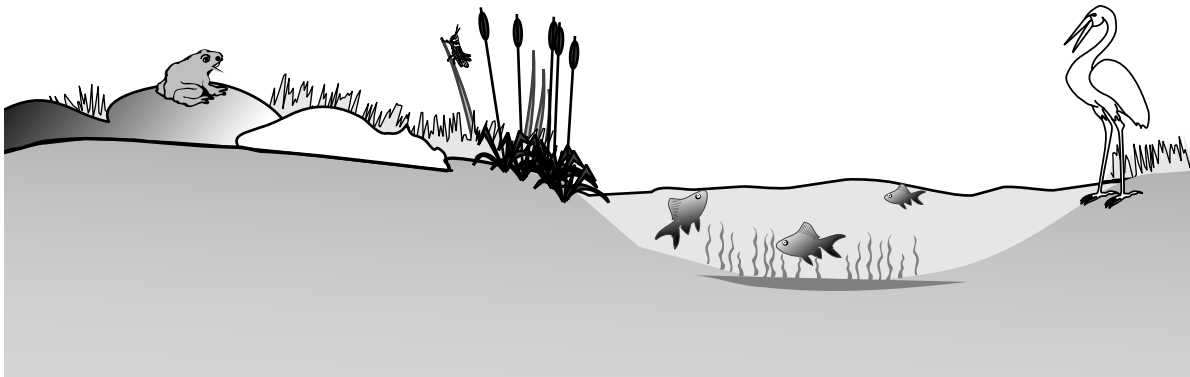
- Ⓐ **Bread → Electricity → Heat → Toast**
- Ⓑ **Bread → Electricity → Toast → Heat**
- Ⓒ **Heat → Electricity → Bread → Toast**
- Ⓓ **Heat → Bread → Electricity → Toast**





23. If you put a hot brick in a bucket of cold water and left it for a while, what would happen?

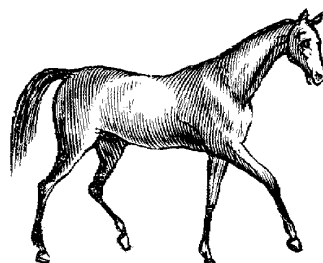
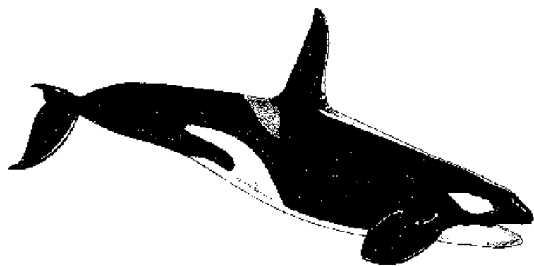
- Ⓐ The brick would get warmer, and the water would get cooler.
- Ⓑ The brick would get cooler, and the water would get warmer.
- Ⓒ The brick would get as cold as the water had been.
- Ⓓ The water would get as hot as the brick had been.



24. The picture above shows a pond community. Which community member would disappear if all of the fish in the pond died?

- Ⓐ the cattail plant
- Ⓑ the insect
- Ⓒ the frog
- Ⓓ the bird





25. Look at the animals above. Which two are most alike? Explain your answer. Give at least two reasons for your answer.

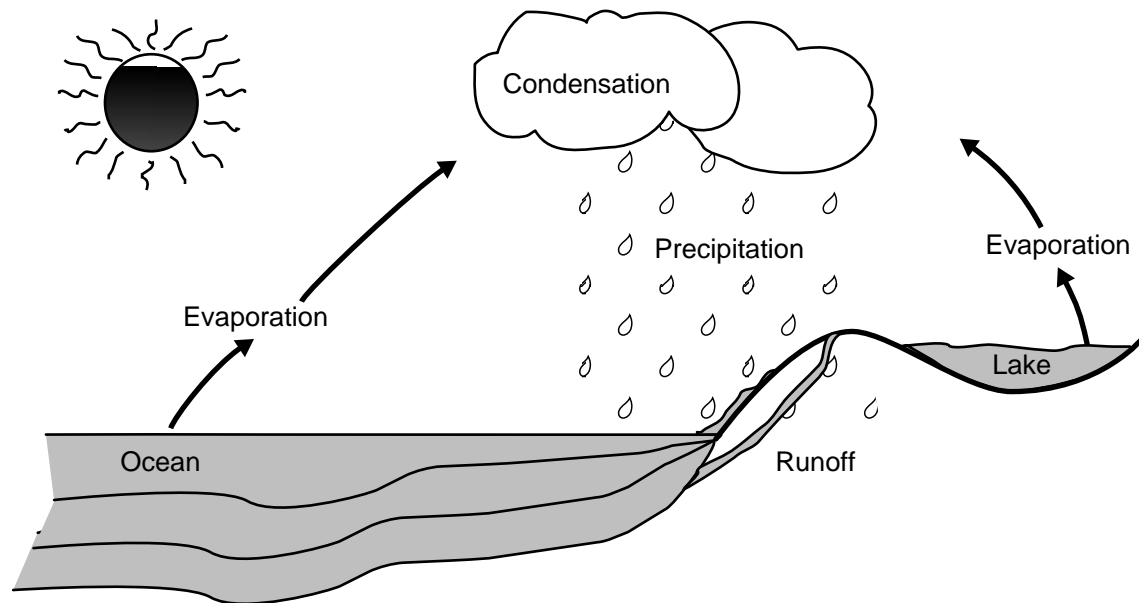
Write your answer on the lines below.

If you have time, you may review your work in this section only.



**DO NOT GO ON
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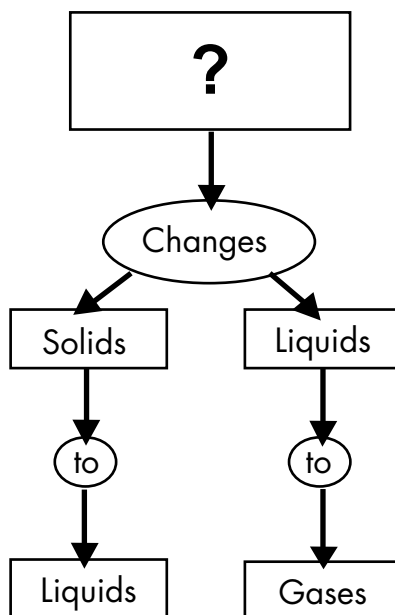
**DO NOT
WRITE IN
THIS AREA**



26. The picture shows the water cycle. What would probably happen if all evaporation of water stopped?

- Ⓐ There would be a build up of clouds.
- Ⓑ There would be increased runoff.
- Ⓒ There would be no more precipitation.
- Ⓓ There would be no lake.





27. Which of these best completes this concept map?

- Ⓐ magnetism
- Ⓑ heat
- Ⓒ sound
- Ⓓ freezing

28. What might happen in New Jersey if the annual precipitation is less than normal?

- Ⓐ There may be ice storms.
- Ⓑ There may be larger ocean waves.
- Ⓒ There may be lots of snow but no rain.
- Ⓓ There may be a drought.

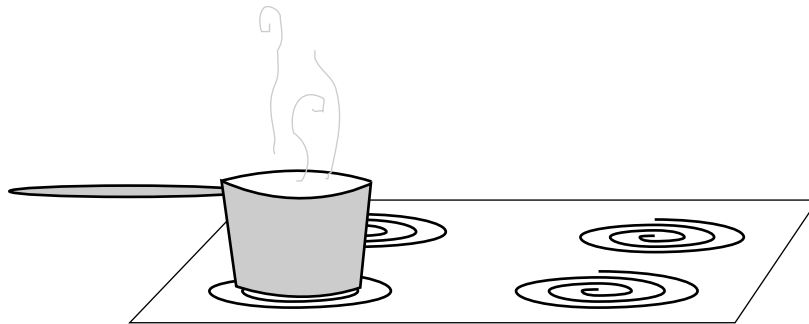




29. When David pushes the button by his front door, the doorbell rings inside the house. Which system is working?

- Ⓐ heating
- Ⓑ plumbing
- Ⓒ air conditioning
- Ⓓ electrical

30. Why might the handle on this pot get hot?



- Ⓐ The food removes heat.
- Ⓑ The handle is away from the flame.
- Ⓒ The heat moves through the pot to the handle.
- Ⓓ The handle is magnetic.

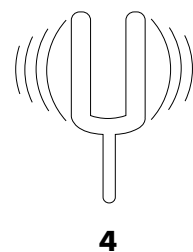
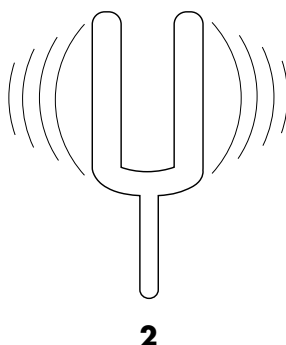
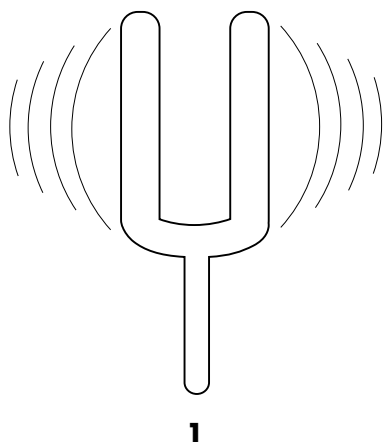




31. Some spiders capture insects in their sticky webs for food. If the insect population died, what could happen to the spider population?

- Ⓐ The spider population would increase.
- Ⓑ The spider population would decrease.
- Ⓒ The spider population would stay the same.
- Ⓓ The spiders would drink water instead of eating insects.

32. When a tuning fork vibrates, it produces a sound. The shortest tuning fork vibrates the fastest. Arrange these tuning forks from low pitch to high pitch.



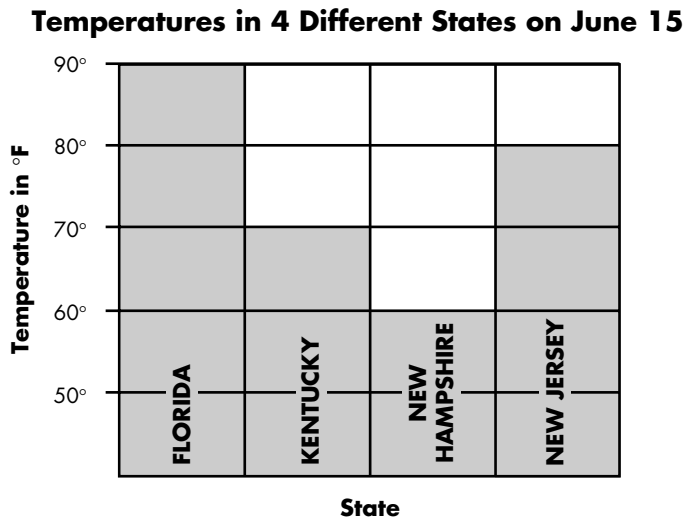
- Ⓐ 1, 2, 4, 3
- Ⓑ 2, 1, 4, 3
- Ⓒ 1, 2, 3, 4
- Ⓓ 3, 2, 4, 1





33. The roots of a tree are used mainly to support the tree and

- Ⓐ **kill earthworms near the tree.**
- Ⓑ **stop loss of nutrients.**
- Ⓒ **take in water from the soil.**
- Ⓓ **make food for the tree.**



34. The chart shows the weather in different states on one day. What type of clothes should Amin wear if he is going outside in New Jersey on this day?

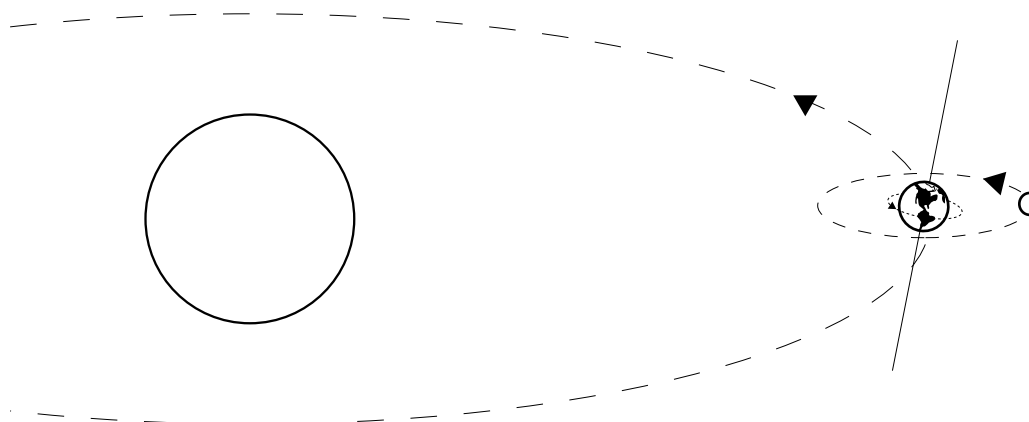
- Ⓐ **a heavy coat and warm pants**
- Ⓑ **a light jacket and sweat pants**
- Ⓒ **a long sleeve shirt and pants**
- Ⓓ **a short sleeve shirt and shorts**





35. Which of these will be most difficult for a person who has a disease of the respiratory system?

- Ⓐ **eating food**
- Ⓑ **staying warm**
- Ⓒ **taking in oxygen**
- Ⓓ **waking up for school**



36. The picture shows the earth spinning on its axis. What would happen if the earth spun faster?

- Ⓐ **Days would be hotter.**
- Ⓑ **Days would be less than 24 hours long.**
- Ⓒ **Days would be colder.**
- Ⓓ **Days would be longer than 24 hours long.**





Day	Clouds	Wind	Temperature	Precipitation
Tuesday			High 62°F Low 60°F	
Wednesday			High 76°F Low 70°F	
Thursday			High 85°F Low 72°F	

37. Using the chart above, which day was the sunniest?

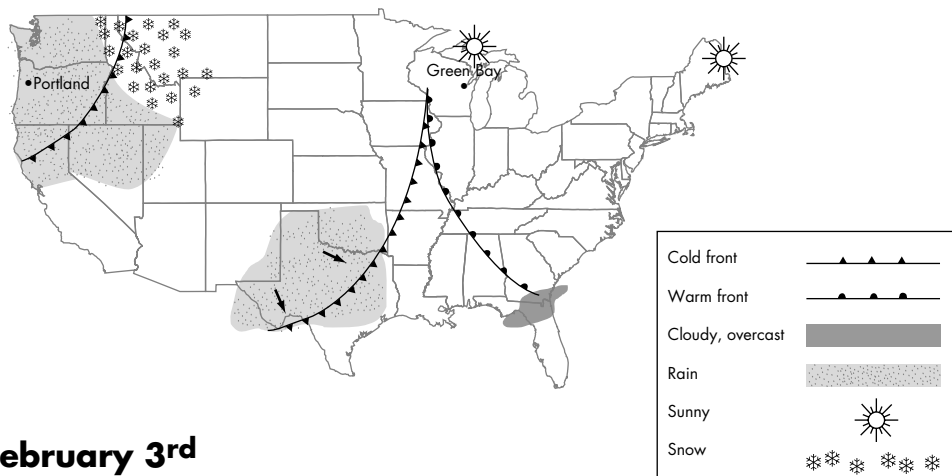
- Ⓐ **Monday**
- Ⓑ **Tuesday**
- Ⓒ **Wednesday**
- Ⓓ **Thursday**



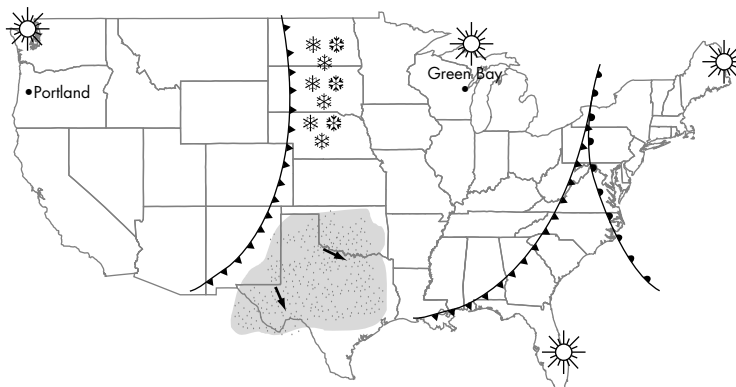


38. The following are weather maps for February 1st and February 3rd.

February 1st



February 3rd



Predict the weather conditions for Green Bay on February 4th.

Write your answer on the line below.

Explain why you made this prediction.

Write your answer on the lines on the next page.





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